Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Assessment and Collection of Regulatory Fees for Fiscal Year 2019	)	MD Docket No. 19-105
	)	
	)	

COMMENTS OF MARANATHA BROADCASTING COMPANY, INC.

Maranatha Broadcasting Company, Inc. ("MBC") hereby offers its comments on the Notice of Proposed Rulemaking ("NPRM") in the above-referenced proceeding. The FCC, in attempting to create a more accurate system of allocation of regulatory fees to be paid by television stations, has inadvertently proposed fees that will impose a significant economic burden on some of the technically weakest stations in their TV markets – VHF stations. The burdens imposed by these proposed new fees do not properly "take into account factors that are reasonably related to the benefits provided to the payor of the fee by the Commission's activities" as required by the provisions of the RAY BAUM'S Act which establish the authority of the Commission to set the annual regulatory fees to be paid by various entities regulated by the Commission.[1]

In the NPRM, the Commission has proposed to implement a proposal that it has been considering for several years to change from a system where it bases fees on the Designated Market Area ("DMA") of the television station to one that is based on the population served by each individual station. Thus, the Commission proposes to use the population within the interference-free service contour of a TV station to compute the fee it will pay, rather than basing

[1] *See Assessment and Collection of Regulatory Fees for Fiscal Year 2019*, Notice of Proposed Rulemaking, MD Docket No. 19-105, FCC 19-37, at 4 ¶ 7 (rel. May 8, 2019).

the fee on the size of the DMA in which the station is located. The intent is to allocate the fees paid by broadcast television stations in a way that "would more accurately reflect the actual market served by a full-power broadcast television station."[2]

While this proposal has been under consideration for the last two years, there have been few comments from broadcasters. With the release of the NPRM, which includes a table of the fees proposed for each individual station, the true impact of the change and its potential unintended consequences becomes clear, even though the proposal is only going to be partially implemented this year. Of particular concern is the adverse impact on VHF stations – particularly those operating with powers in excess of the normal Class maximum for these stations as they try to ameliorate the inferiority of the VHF signal in the digital television world.

The Commission's proposal to base its fees on the population within the TV station's projected noise-limited contours does not reflect an adequate measure of the actual service provided by stations – particularly VHF stations. The Commission has recognized many times the inferiority of the VHF station's signal reception when operating in a digital mode. For instance, in the recent incentive auction, broadcasters were paid to move from a UHF to a VHF channel and paid even more to move to a low VHF channel, because of the technical inferiority of those channels and their inherent undesirability to broadcasters.[3] In the context of regulatory fees, the FCC recognized the change in status of VHF from the preferred means of transmission in analog broadcasting to an inferior one in digital, by removing the premium that VHF stations had paid in their regulatory fees before the digital transition.[4]

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[2] *Id.* at 9 ¶ 20.
[3] *See Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6567, 6725-26 ¶¶ 369-71 (2014).
[4] *See Assessment and Collection of Regulatory Fees for Fiscal Year 2013*, Report and Order, 28 FCC Rcd 12351, 12362-63 ¶ 30 (2013).

In connection with an application to increase the power of MBC's WDPN,[5] its President (and former Director of Engineering), Mr. Barry Fisher, conducted signal strength surveys of UHF and VHF signals in a typical home in the Philadelphia market. The report he generated is attached and clearly demonstrates the difficulty VHF signals have in overcoming background interference, even where their signals are predicted to be strong. It is not the interference from other TV stations that is the issue (which is measured by the noise-limited contour), but the general environmental noise that dramatically affects VHF stations, while having far less impact for stations operating in the UHF band.

The issues with the proposed fee-metric are compounded for VHF stations which have attempted to overcome the background noise by proposing power increases beyond the maximum power levels usually accorded by the FCC rules to these stations.[6] While these power increases are done principally to boost the signal strength of the station in its core market to attempt to achieve some comparability with UHF stations (even with increased power, it is often difficult as because of the limitations of most home antenna – see the statement of Mr. Fisher, attached), they have the effect of increasing the predicted reach of the noise-limited contour. The real effect on the reception of these stations by a distant viewer is minimal given the limitations of VHF signals and, in some cases, the received-interference from other VHF stations in nearby markets that have engaged in mutual upgrades to increase their signal strength. Yet each of these added theoretical viewers counts in the Commission's determination of the regulatory fees to be paid by the station.

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[5] *See* LMS File Number 0000035792 (granted June 4, 2018) at "KJWP Request for Waiver Exhibit". At the time this application was filed, WDPN's call letters were KJWP, hence the reference to KJWP in the attached exhibit.

[6] See 47 C.F.R. § 73.622(f) which sets out the DTV power limits.

While the impact of the fees is most pronounced on VHF stations, there are broader questions of whether the population served really is the best way of assessing the regulatory fee. While the Commission notes that population has served as the base for fees paid by radio, the economics of the radio industry are much more dependent on over-the-air audience reach than they are in TV. In radio, much of the listening is done in cars. TV viewing, by contrast, is most often done in the home, and the majority of viewing is still done through MVPDs who make programming available throughout the DMA. TV viewing thus is not as tied to the reach of the station's service contours.

Advertising buyers, too, tend to base their ad buying on decisions on the DMA in which a station operates, rather than the over-the-air coverage of individual television stations. For instance, MBC's WFMZ, being located in Allentown in the northern part of the Philadelphia market, is calculated to have more viewers than many of the other Philadelphia-market stations. But many of these viewers are in the New York TV market (or in other adjacent markets), and not routinely considered by advertisers in their decisions whether or not to buy advertising on WFMZ.

The impact of the policy change can be seen clearly by reviewing the proposed fees for MBC's two Philadelphia market VHF stations. WDPN-TV, licensed to Wilmington, is proposed to pay $68,881 this year on the blended fee determination methodology, while it would pay only $54,000 on the DMA-based methodology. Next year, its fee will go to $83,763 when fees are based 100% on population. As WDPN-TV has an outstanding construction permit to increase power to a power similar to the power of WPVI-TV in Philadelphia, a VHF station that is already operating at a power greater than the maximum power routinely granted to VHF stations, MBC expects that the fees for WDPN-TV to approximate the $100,613 that WPVI-TV would

pay under a regulatory fee fully based on predicted coverage. WFMZ-TV in Allentown current faces a situation worse than WDPN presumably because of its reach into the New York market. Its fees will be $72,837 this year, increasing to $91,675 when the fees are computed solely on population.[7] That compares with Philadelphia UHF TV stations like WCAU (to pay $66,778 this year and $77,557 next year) and KYW-TV ($66,958 and $79,916). No one would claim that the WDPN and WFMZ signals are superior or even comparable to those of the UHF competition, yet these stations are slated to pay more in regulatory fees.

In many cases, these fees are being disproportionally assessed on parties who can least afford them, and on stations with the worst actual over-the-air reception. MBC has never been opposed to paying fair fees consistent with those paid by other stations in its market. But these new fees impose a larger burden on these VHF stations without adequate review of the policy basis for doing so. In assessing its fees, the Commission must take into account the benefits that the parties who are paying them receive from their licenses. The technically inferior VHF stations should not be charged more than UHF stations that operate in the same market but are far more valuable simply because of the spectrum which they occupy. The parties

[7] WFMZ-TV also operates as part of a 4-way channel share of its VHF signal. While the other 3 stations are operated by nonprofit entities, if they had been for-profit companies, the FCC would be collecting 4 times for the same 6 MHz of spectrum.

respectfully request that these fees be adjusted, either by returning to the DMA-based fees, or by imposing lower fees than those that are proposed for VHF stations.

Respectfully Submitted,

MARANATHA BROADCASTING COMPANY, INC.

By: /s/ Barry Fisher
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Date: June 6, 2019

STATEMENT OF BARRY FISHER, PRESIDENT OF MARANATHA BROADCASTING COMPANY INC.

Statement of Barry Fisher, President and General Manager of Maranatha Broadcasting Company Inc. (MBC), owner WFMZ-TV since November 1976 and KJWP-TV since September 2017.

He started his career as the Director of Engineering for WFMZ-TV in 1978 and is an SBE Certified Professional Engineer. In 1997, he was promoted to President and GM of MBC. 40 years of working with viewers on receiving issues has given him a good insight on how different channels can be received in the region.

MBC purchased KJWP-TV on September 1st, 2017 and the station is operated from our control point in Allentown, PA. The majority of television stations in the Philadelphia market, including KJWP-TV, a MeTV station, have transmitter sites located in the Roxborough antenna farm located in Philadelphia.

WPVI-TV Channel 6 and KJWP-TV Channel 2 are in the Low VHF band, and the majority of other stations in the market are in the High VHF or UHF bands. WACP-TV Channel 4's tower is located south of Philadelphia. When the digital transition occurred, it is well-documented how stations in the Low VHF band lost service to areas previously served while broadcasting in analog. WPVI-TV was eventually granted an increase in power from 7.6KW to 34KW on October 19, 2012, which helped resolve some issues, but not all, as our test will show.

As a lifelong resident in the Philadelphia market, I can attest that even with WPVI-TV's increase to 35KW, it still does not share the same penetration to homes as the UHF affiliates in the market. Even with an all-band antenna, both WPVI-TV and KJWP-TV still are more difficult if not impossible to receive for multiple reasons, including well-documented impulse noise.

TEST TO DEFINITIVELY ILLUSTRATE THE IMPACT OF IMPULSE NOISE TO LOW VHF RECEPTION

To illustrate this fact, we conducted a test at a residence approximately 40 miles north of the antenna farm from which most of the Philadelphia stations transmit. The house is located at approximately 700 feet AMSL with a clear line of site to the Roxborough antenna farm. It is in a neighborhood where the homes are on 1-acre lots, which allowed us to isolate potential impulse noise for the test.

A typical antenna that the average consumer would have access to was bought at the local Walmart. It was a GE Pro Outdoor Antenna, one of the few sold at Walmart that lists VHF as one of its capabilities. The antenna has no technical specifications listed other than the claim that it "works within 70 miles". It is a Yagi antenna approximately two feet long. We do not know if the VHF claim on the antenna box includes Low VHF in its design or not.

The test proved to be quite revealing. At first, the antenna was located inside the home on a tripod near the television, approximately 6 feet in elevation. It was oriented toward the antenna farm with only a window as its obstacle. After peaking the receive signals to antenna farm, virtually all of the UHF stations were receivable but no Low VHF stations were received (see table #1).

The antenna was then located on the same tripod approximately 90 feet outside of the house, away from any other homes by several hundred feet. Using the same antenna, television, and coax, Channel 2 could be viewed with an 18.6 SNR and Channel 6 with a 19.5 SNR. The UHF stations were virtually unchanged (see table #2). This test was the first step in illustrating how impulse noise definitively impacts Low VHF stations and has no effect on UHF or High VHF Stations.

The same antenna system was relocated to 5 feet from the house with a clear view to the antenna farm but in close proximity to the house. The same tests were repeated. Again, Channel 2 and Channel 6 could **not** be received, and the UHF stations remained unchanged (see table #3).

With the antenna still located 5 feet from the house, the main circuit breaker to the house was turned off, assuring all sources of impulse noise were removed with the exception of the UPS powering the television. Channel 2 was now receivable with a 16.5 SNR and Channel 6 with a 22 SNR. The UHF stations remained unchanged (see table #4).

This test was conducted in a location with the most favorable circumstances where there was a large separation in homes. In locations where residences are townhomes or apartments that are packed together, the impulse noise to an antenna will logically increase dramatically due to the number of appliances, HVAC, and other sources of noise in the more densely compacted environment. In fact, I have personally spoken to viewers who receive Channel 2, and complain of pixilation and lost signal around dinner time. One might assume that microwave ovens and other appliances could be the source of increased impulse noise causing the loss of signal.

CONCLUSIONS FROM THIS TEST

This test conclusively and unequivocally confirms what the Low VHF broadcasters in this filing are facing. Impulse noise is a major factor that can only be overcome by increasing the transmission power side of the equation. Antenna gain itself will not change the ratio of received signal to noise in the home.

ANTENNA DESIGN AND AVAILABILITY IMPACTS TO LOW VHF BROADCASTERS

A visit to the local Walmart illustrates a second problem that Low VHF broadcasters face. There are many antenna selections, but few state exactly for which band the antenna is designed to receive. Most simply say "HDTV antenna" followed by a radius of coverage. IE: "HDTV antenna, 30 mile range"; or "HDTV antenna, 50 mile range"; etc. Even if the manufacturer listed the operating frequencies or bands the antenna was designed for, only an experienced broadcaster or ham radio operator would understand the antenna was only built for UHF reception. There were a few antenna options for VHF, and most of those antennas were for High VHF, not Low VHF.

Modern consumers, especially those living in apartments, will generally pick an antenna that fits conveniently beside their TV on a shelf or desktop. The author of this report has personally encountered hundreds of conversations with viewers and friends completely oblivious to the need for an antenna specifically built to receive Low VHF stations that is required to receive the most watched station in the market, Channel 6, as well as petitioner's Channel 2.

In fact, the broadcasters' virtual channel scheme reinforces consumer confusion. In the Philadelphia market, there is a station branded as "Channel 3" that actually operates on UHF channel 26, and a "Channel 10" which is on UHF channel 34. So logically the average consumer believes they are picking up Channels 3 and 10, therefore they should receive Channel 6, since it is between 3 and 10. The modern consumer lacks the knowledge to understand that Channel 6 and Channel 2 are in fact Low VHF channels and that they need a different kind of antenna to receive these signals. The way antennas are packaged and sold to the consumers does nothing to help them appreciate the difference and, even if they did, most consumers would be lost on the need for one over the other.

Given this obvious reality, a Low VHF broadcaster has no option to reach these consumers other than to increase their transmitter power to overcome the lack of antenna gain in most consumer antennas (and in some antennas that are on the market, a negative gain to Low VHF broadcaster).

ANTENNA DESIGN REALITIES

On their website, Channel Master lists the full specifications for antennas they sell and further illustrates the reason the petitioners are asking for this power increase.

A Channel Master CM40001HDBW Flat antenna listed on their website has the following specifications: 174- 216 MHZ and 470-700MHZ with a gain of 3-6db on VHF (that is High VHF) and 6db gain on UHF. There is no listing of gain for Low VHF, so one can assume it is zero or negative gain. The differential between UHF and Low VHF would be in excess of 6db and being located inside the house, the added loss of impulse noise makes this differential even worse.

The Channel Master ULTRAtenna 60 is a high gain antenna, small enough to conceivably be installed behind a TV or closet in an apartment. It has the following specifications: 174- 216 MHZ and 470-700MHZ with a gain of 3.5db on VHF (that is High VHF) and 10db gain on UHF. There is no listing of gain for Low VHF, so one can assume it is zero or negative gain. The gain differential between UHF and Low VHF can be assumed to reach 10db, and adding impulse noise makes the differential even worse.

The Channel Master STEALT 50 is a 23.5 inch long antenna with the following specifications: 54-216MHZ and 470-700MHZ with a gain of 3db on VHF and 9 DB gain on UHF. The gain differential between UHF and VHF is 6db, and this does not consider the extra noise generated to Low VHF due to impulse noise.

We outline these antenna options so the FCC can understand the reason the four stations entering into this Mutual Upgrade Agreement arrived at 9db. It was not an arbitrary number, rather one gained from years of practical experience. Only when you assume the customer is willing to install a 10 foot long roof top antenna is the antenna gain of UHF and Low VHF closer to equal.

SUMMARY

WVIR-TV, KJWP-TV, WACP-TV, and WJLP-TV have invested a lot of time and money to engineer and reach this agreement for increasing our power levels by 9db. The cost to upgrade each facility and operate them on an ongoing basis is significant. But uniquely, these four stations are in the lowest section of the Low VHF band, channels 2-4, in the most congested area of the country. Low VHF stations

are clearly the most impacted by impulse noise and receiving antenna performance. With WVIR-TV moving from a 1 Megawatt UHF to channel 2, without the proposed 9db increase, a significant number of viewers will experience loss of service that will generate many complaints to the station, FCC and Congressmen from viewers.

As a viewer of KJWP-TV, I have personally experimented with various antennas and found that the difference in gain is in fact a real factor in receivablility. My interaction with hundreds of viewers since the digital transition reinforces the fact that the modern consumers are lost to the differences in broadcast bands. Broadcasters cannot mandate what antennas a consumer will use, and it is obvious by what type of antennas are being advertised and sold in mass. The marketplace favors smaller antennas and that fact places our four stations at a severe disadvantage to other broadcasters.

Clearly in the Philadelphia market, Channel 6 is already almost 6db stronger then Channel 2, and it still is not strong enough to overcome the impulse noise at our test location.

Therefore, the four Low VHF broadcasters party to this agreement respectfully request the FCC grant this power increase, so we can serve the public in similar fashion to our High VHF and UHF competitors. We have done the heavy lifting to engineer this pathway to resolve our issues. We strongly believe it is in the public interest and the FCC's long term interest to grant this four-party wavier. The public should not be denied the ability to view our stations by holding us to an outdated limitation on the power we are permitted to transmit.

The foregoing is true and correct to the best of my knowledge and belief.

Barry Fisher, President

Maranatha Broadcasting Company Inc.

Dated: November 28, 2017

TABLE #1

Antenna located inside home near window 6ft elevation.

Ch #	RF Ch #	SNR	Relative Signal Strength	
2	2	0	0	
3	26	28.3	81	
6	6	0	0	
10	34	20.2	39	
17	17	26.8	68	
29	42	17	16	
35	35	17.8	21	
39	39	26.3	68	located in Allentown
51	25	21.1	38	
60	9	28.1	78	located in Allentown
61	31	23	49	
62	34	19.6	31	
65	29	26.5	67	
69	46	31.5	95	located in Allentown

TABLE #2

Antenna located 90ft away from the house 6ft elevation.

Ch #	RF Ch #	SNR	Relative Signal Strength	
2	2	18.6	25	
3	26	19.5	36	
6	6	21.8	45	
10	34	23.3	51	
17	17	27.7	74	
29	42	27.95	77	
35	35	0	0	
39	39	24.9	58	located in Allentown
51	25	23.2	49	
60	9	19.3	30	located in Allentown
61	31	24.9	60	
62	49	22.2	44	
65	29	26.9	68	
69	46	30.4	95	located in Allentown

TABLE #3

Antenna located 5ft away from the house 6ft elevation, House Power ON

Ch #	RF Ch #	SNR	Relative Signal Strength
2	2	0	0
3	26	19.5	36
6	6	0	0

TABLE #4

Antenna located 5ft away from the house 6ft elevation, House Power OFF

Ch #	RF Ch #	SNR	Relative Signal Strength
2	2	16.5	14
3	26	19.5	36
6	6	22	45